

Fig. 9.



THE AISLE VAULTING OF WINCHESTER TRANSEPT.

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(Continued from page 320)

IN the vault of the south-east corner of the south arm (Fig. 10) more curious features occur. In this vault not only was an addition made to the transverse arch *d*, as in the corresponding arch of the vault last examined, but the wall arch was likewise reinforced. Thus when the groin ribs were introduced their points of springing could be brought more nearly in the angles of a rectangle, save the point *c*, to which the rib *a* was extended so as to reach the reinforcing shaft of the respond that stands far out of the rectangle. It will be well to compare more closely for a moment the manner in which the ribs of the vault *B* (Fig. 1) and those of this vault are adjusted on plan. In the vault *B* the ribs spring on the south side from the salient angles of the pier *a* and the respond *b* respectively, while on the north side they spring from the re-entrant angles of the compartment, and are thus farther apart on this side than they are on the other: which brings the four points of springing into the angles of a trapezoid, instead of a rectangle, as I have before said. But in the vault we are now considering (Fig. 10) all the springings would be nearly in the angles of a rectangle if the rib *a* were not prolonged to the point *c*. The narrowing of the transverse arch *d*, in a curved line, toward the respond, and, to a less extent, the narrowing and curvature of the wall arch *e*, so notice-

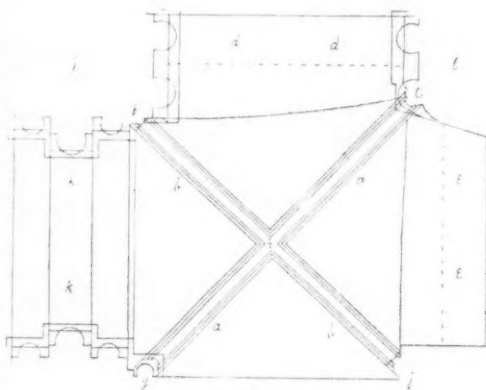


Fig. 10.

BB

able on the plan, are due to the fact that instead of breaking an opening in the angle of the reinforced impost to receive the rib, as was done in the corresponding part of the other vault, these arches were cut away in this fashion over almost their entire lengths in order to get the ribs in.*

Both ribs in this vault are straight on plan, and the point of intersection is nearly in the middle of the compartment as diminished in area by the reinforcements, thus not in the middle of the vault, from which it is considerably removed both toward the south and toward the west. In elevation they appear to be single arcs, but their springing levels differ, and the adjustments at the springings present some strange features that are worthy of notice. The rib *a*, at the point *c*, springs, as I have said, from the capital of the reinforcing shaft of the respond *l*; but at the other end, the point *g*, it springs from a square block set upon the capital of the groin shaft, and nearly flush with the sides of its abacus, as shown at *x* in Fig. 11†; while the rib *b* springs, at each end, from a corbel set diagonally, with its upper surface about 60 centimetres above the true impost level. Fig. 12 shows the corbel of the impost *f*, and its relation to the capital of the reinforcing shaft attached to the pier. The use of the square block at the springing *g* of the rib *a* grew clearly out of the unequal lengths of the two sides of this rib, caused by the fact that the side *hc* springs from the capital of the respond shaft standing outside the rectangle of the compartment, as just observed. Since it thus starts from the true impost level, it was impossible that the shorter side *hg* (a portion of the same arc, with its crown at the crown of the vault) should spring at the same level; for if (Fig. 13) we describe an arc *acb*, and then shorten *ac* by cutting it off at *d*, the point *d* will, of course, be above the level of the line *ab*. Thus it was in order to reach this point that the square block was inserted at *g* of the plan. But with the rib *b* the conditions are different. Since its springing at *f* is from the re-entrant angle formed by the pier *j* and the great archivolt *k*, and its springing at *i* is from that of the window jamb and the south wall, it is shorter than the other rib; and, since its opposite sides are practically equal in length, they both spring from about the same level, that is, from the corbels above described, which are, as I have said, about 60 centimetres above the normal impost level. That these springing points are so much higher than the springing of the rib *a* at *g*, where the square block occurs, is, of course, due to the fact that more of the arc is cut off; for if (Fig. 13) we lay off on the line *ab*, the length *gh* on plan of the shorter rib, with its ends equally distant from *a* and from *b*, and from these ends, *g* and *h* respectively, set up vertical lines, they will cut the arc in the points *e* and *f*, which are higher than the point *d*.

Before leaving this south-east vault it should be remarked that the backings on the ribs widen as they rise, so that their sides incline, instead of being vertical; but they have plane surfaces, which cut the vault in sharp lines as before.

Coming back to the north arm, we find that the middle vault of the eastern aisle—which adjoins the vault *B* (Fig. 1)—has had its ribs inserted at a later time than any of the others. They appear to date from about the middle of the thirteenth century, since their profiling (Fig. 14) is like that of the choir of Westminster. That a Norman ribless vault should have had ribs built under it at this advanced period is remarkable. This compartment retains its original proportions, and the ribs spring from the primitive groin shafts, follow on plan the groins of the vault, and thus intersect in its centre. Having the full span of the groins of the vault, their curves had to be struck from a point farther below the springing line, and they, therefore, form more acute angles with the supports. Each rib is in the form of a single arc, and, since the springings are from the original groin shafts, the backings are

* It will be noticed on the plan that the jamb of the arch *e* is splayed on the north side and square on the south. A reason for this irregularity does not appear, but it is of no importance, and was presumably brought about in connection with the later introduction of the large late pointed window that now fills the space beneath the arch.

† Fig. 11 is taken from the adjoining vault of the east aisle. I had made this drawing before I had studied the vault we are

considering, but it serves for illustration, since the block and its relation to the rib and the supporting shaft are exactly the same in both of these vaults. But in the illustration we see the block in connection with other members of the pier and archivolt, while in the vault we are considering these other members are hidden by the wall that now encloses the compartment on the west side.

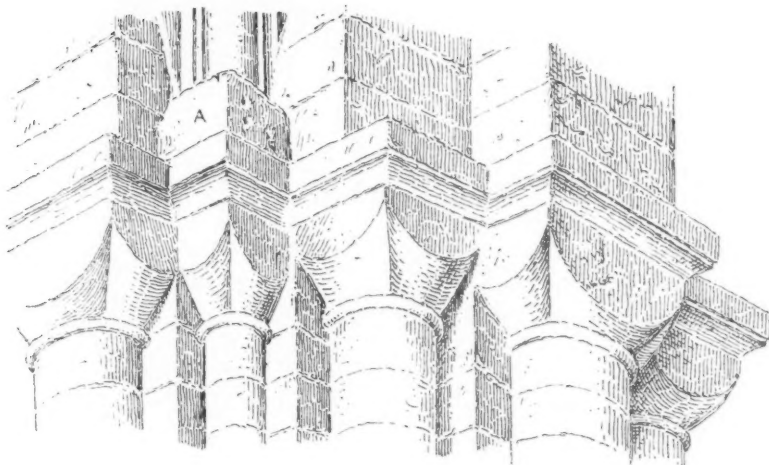


Fig. 11.

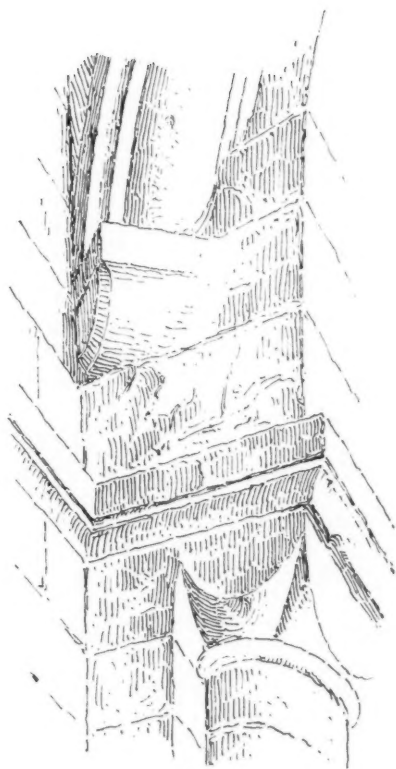


Fig. 12.

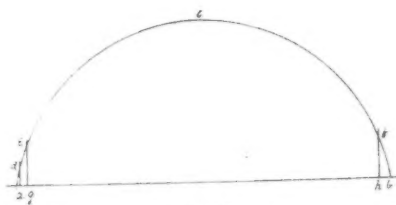


Fig. 13.

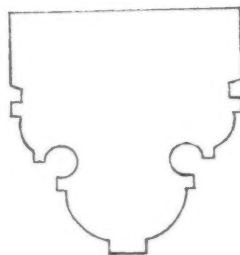


Fig. 14.



naturally equal on the opposite sides. But in some places the backings of this vault are more or less arched out, so as to pass into the surface of the vault instead of cutting it.

I have described these altered vaults in the order in which I have studied them, but looking back over the series, and comparing them, I am inclined to believe that the order in which they were changed was different. The makeshifts of the south-eastern vault of the south arm show a degree of awkwardness in adjusting the ribs that would seem to point to this vault as the first to which ribs were introduced; the adjoining vault—the middle one of this eastern aisle—since it has fewer awkward features—appears to me to have followed next; the north-east vault of the north arm was, I think, the third; and the middle vault of the north-eastern aisle was clearly the last. It is worthy of remark that a motive on structural grounds for the introduction of these ribs does not appear. The fact that the unaltered vaults remain intact shows that no reinforcements were required.

As for the vaults that appear to have been entirely rebuilt, one of which—the middle one of the western aisle of the south arm—is shown in Fig. 9 [p. 329],* their ribs are formed like the others. That is to say, their curves are again struck from below the springing level, so that the crowns of the vault cells are kept in straight lines, like those of the primitive ones; but there are none of those awkward adjustments at the points of springing that we have noticed in the altered vaults, and, save for the straight crowns, the conformations of the cells are wholly new, since they are shaped to the ribs, and are, therefore, nowhere cylindrical. But on account of the retention of the segmental form of rib—that had to be employed in the old vaults—these new vaults have not the character that is proper to vaulting on entirely independent rib systems—in which the groin ribs are made semicircular. The compartment shown in the illustration has been walled in, in modern times, on the north and east sides, but it appears otherwise intact. In the vault, as will be seen, the plaster is off in some places, enough to show that it is built of roughly cut stones, varying considerably in size, and that in warping the surfaces to the ribs some of the courses had to be made more or less gore-shaped. The warping, or ploughshare conformation, of these surfaces is naturally very marked from the springing up to the haunch. The wide transverse arch, the springing of which is seen to the right, is one of those that were reinforced in provision for the projected towers; the adjoining compartment, from which we get this view, being that of the south-west angle. The reinforced part of the arch is, of course, the hither side of it, and enough of the masonry can be seen through the plaster on the soffit to show that this reinforcement constitutes more than half of the arch as it now exists. It will be understood that the shaft to the extreme right, and the masonry with which it is engaged, are parts of the reinforcement; and it is worthy of notice that a part of the capital of the primitive groin shaft appears in the opening between the two larger capitals, as I have said that one does in the respond of the vault *B* (Fig. 1) noticed above. All the other members of this pier, visible from this point, belong to the primitive construction.

Taken altogether, these Winchester vaults are important in their bearing on the question of Norman initiative and inventive progress in mediæval vault development, on which opinions have differed. We see in them, it appears to me, two influences at work, that of the old Roman tradition, and that of the new organic style of building that was taking form on the Continent. But these influences are mutually incompatible. The Roman groined vault does not lend itself to development on the lines of the ribbed vaulting of organic mediæval architecture. Such development requires that the form of the vault be not a resultant of any interpenetrating surfaces, but a *consequence of the forms and adjustments of an independent skeleton of ribs*. In place of the semi-elliptical groins of the vault formed by the interpenetration of half cylinders, the mediæval ribbed vault, of the progressive builders of the Continent, has of necessity semicircular groins, since they are formed on semicircular diagonal

* I regret that, on account of the contracted space of the adjoining south compartment, from which the photograph had to be taken, the perspective distortions of the illustration

could not be avoided. But, with due allowance for these, the character of the vault may be perfectly understood from it.

ribs which were first set up; and to these ribs, together with the arches, or ribs, on the sides of the compartment, the constructor fitted the vault, warping its surfaces in any way that the proportions and adjustments of the several ribs in the skeleton required. It is this that differentiates progressive mediæval vault construction in north-western Europe from all other.

There could, of course, be no development of an independent rib system in connection with the old vaults of this transept, but in those that were rebuilt we should expect, if the builders were awake to the true principles of ribbed vaulting, to find changes in the forms and adjustments of the ribs. But, as I have said, no changes were made. The ribs of the rebuilt vaults virtually reproduce those of the altered ones. Thus, while the shaping of the vaults to these ribs changes their conformation materially, yet they do not become ribbed vaults in any full and proper sense. In true ribbed vaulting the rib system is primary, and in all organic building of the Middle Ages, as in natural organisms, primary things determine all others.

The supports, as we have seen, are all of the primitive work, and include small shafts under the groins, but in plain groined vaulting no such shafts are required. The square pilaster strip—as in the crypt of the dormitory at Westminster and in the aisles of the chapel of the Tower—is all that is needed, and where the groin is not salient at the springing even this is unnecessary, as we see in the perspective elevation (Fig. 3) of the impost at *k* (Fig. 1) where the groin springs out of the re-entrant angle. The introduction of this shaft was not, therefore, a natural provision for a structural need, as the groin rib shaft in a truly organic system is. Such a member has no propriety in connection with a ribless vault, and in introducing it the Norman builder appears to have been working imitatively. In the altered vaults the interpolated ribs give, it is true, a use for these shafts; but, since the ribs themselves have, as we have seen, no justification on structural grounds, the imitative character of both can hardly be questioned.

The accidents of free-hand execution are marked in every part of the work. Hardly a line, on plan or in elevation, would be found to coincide with a straightedge. The arches and archivolts are on plan more or less curved or sinuous, and are often narrower at the crown than at the springing, while in elevation they are variously irregular, some being semicircular, some less than half circles, some stilted, and some of horseshoe form. These variations arise in part from differences of span in relation to height, but why one arch should be stilted and another horseshoe-shaped it is hard to determine.

The bases are profiled as in Fig. 15, and some of them are astonishingly irregular in form. In one base of the north return aisle the fillet that divides the scotia from the lower torus does not lie in anything approaching a horizontal plane, but in a surface that undulates like a wave of the sea. The capitals likewise show all manner of irregularities, and their flat sides are in most cases more or less hollowed and winding.

As for the structural system of this transept as a whole, it is curiously illogical. The tall shafts that reach to the wall cornice could not carry vaulting, since vaulting cannot spring from the top of a wall. The short shafts, too, over the ends of the return aisles have no intelligible purpose that has yet been discovered. Willis suggests the possibility of an intention to erect an arcade over the return aisle, and to utilise the gallery thus enclosed for chapels or for the preservation of relics. The ends of such an arcade, he appears to think, might have been supported on these shafts; and he questions whether certain signs of disturbance which he finds in the masonry over the shafts may not be traces of something once actually built there. But arches springing from these shafts would not range in height with those of the triforium, and such an arcade could not, therefore, I think, have been contemplated. Mediæval architecture, however,

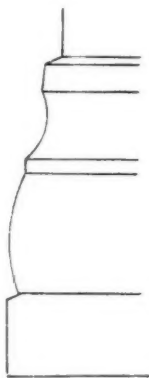


Fig. 15.

on the Continent as well as in England, often presents many equally puzzling features. The clerestory in its relation to the substructure is no less incongruous. It has the usual Norman passageway, but the composition is not the same throughout. In the bay adjoining the great reinforced pier of the crossing

it has, as will be seen in the headpiece, a great opening, the unsplayed jambs of which are solid above the passageway, with a small shafted arch on either side in the inner plane below it. This gives, on the inside, a group of three arches which would, if there were vaulting, fall within a wall arch; but without such an arch there is no reason for such a group. Under the timber roof arches of equal height would be more natural and appropriate. Beyond this—since the shafts over the ends of the return aisle are not carried up like the others—the clerestory is not divided into bays. Nevertheless two groups of arches, substantially like the first, are given here, with the two small arches, where the groups join, brought together and supported on three small shafts. Willis supposes that the clerestory and the substructure were built at different times, but this does not explain their lack of structural consistency. The ground story and triforium arcades are strictly logical in composition, and it is strange that the same logic should not extend through the whole system.

But, notwithstanding its structural aberrations, the total effect of this transept is one of impressive grandeur. It has a massive dignity and restraint that are, I think, seldom equalled. The plain square-edged archivolts, the cubic simplicity of the capitals, and the prevailing severity of expression give something of a Doric quality, notwithstanding the essential difference between it and any Doric art.

RICHARD PHENÉ SPIERS.

IT must have been about 1880 that I met the late Phéné Spiers. He was the master at the Royal Academy School of Architecture, and I there came under his instruction for the first time. The scheme of education had then, I think, been recently reorganised. The method was to work out certain "subjects" under the advice of R.A. Visitors. As an example, I may recall that I did a Bishop's Tomb under Street, the Hall of a Country House under Norman Shaw, and a City Clock Tower under Waterhouse. It was good fun, but it was anarchy. The constant master was, of course, overruled by the various opinions of the succession of Visitors, and thus the influence of the one man who could have taught us something of system and linked us to the larger European tradition of the time was rendered unavailing. Before this time Spiers, on winning the Soane Medallion and Travelling Studentship, had travelled in Egypt, Syria, and Greece, working for part of the time with students from Paris. Either on his return, or before, he studied in the Atelier Blouet-Gilbert, where he made many friends with whom he long maintained relations. Spiers was in much a follower of Cockerell, and he was not able to accept the narrowly concentrated point of view of the Gothic revivalists. His early studies at Athens, Damascus, and Luxor prevented that, as also did his training in the French tradition. He indeed was the one link between the older days of architectural thought and our present time. It was a difficult and lonely position; he knew that he knew, but he had nothing of bitterness, and he openly admired the diverse gifts of Street, Shaw, and the others. He was a true cosmopolitan; the position, one might have thought, would have forced him into opposition to the "mediævalism" of his time, but it did not. He saw

and loved the Gothic equally with the Greek as part of the great process of architecture, and I don't think he felt any more need to love one and hate the other than he did to love mutton and hate beef, or *vice versa*. He was thankful for both. His attainments as a draughtsman were already of a high order when he went on his scholarship tour, and he brought back a fine collection of studies. I remember especially drawings of Egyptian capitals, of the interior of the Great Mosque at Damascus, and of the Parthenon. Later he became a fully qualified water-colour painter of architectural subjects, and regularly exhibited. He was one of the first to be interested in Japanese art, of which he was quite a connoisseur. His building practice was never, I believe, large, but he did some able work.

From about 1890 to 1900 I frequently saw Spiers, who from this time was an older friend. I was welcomed at his house, and had many long and to me delightful conversations on our common friend Architecture. At this time I suppose he was the only man in England who took the whole world for his province, and he was always ready to discuss Greek origins, or Persian art, or the problems of vaulting. For his even friendliness at that time I owe him very much, it was one of the things which made living in London just possible for a lonely person.

His historical knowledge of architectural monuments was not only very wide, but also, I think, remarkably sound and sure: he had the instinct for dating and placing. Then he had travelled widely, and knew foreign and American architects better than any other English architect, and was, indeed, in this respect a "national asset," for they liked, and could understand, Spiers. Yet he was wonderfully modest—it is true—and talked with us with less than no sign of the superior, overbearing manner. That

indeed was his weak spot (!), he did not care for riding over people. As to his helpfulness in advising generations of students where to go and where to find what they wanted, his patience is hardly to be believed.

To the Institute of Architects he was for a great many years a loyal supporter. Here, again, he was a giver rather than a receiver. Spiers' special gifts for research in the history of architecture would not only have been more appreciated in other countries, but in them he would have been likely to get some appointment related to such researches. As it is, I cannot but think that his gifts were largely wasted. Even his volume of collected Essays was published by a small group of friendly admirers as part of a testimonial to him in 1905. Two days ago I met Mr. Bilson, and on speaking of our loss in the death of Spiers he told me a story with which I will end. A great French archaeologist was visiting him a few years since, and noticing the volume *Architecture East and West* on his shelves, remarked, "That is a good book. I wish we had architects in France who made studies like that."

Oct. 12, 1916.

W. R. LETHABY [F.]

Richard Phéné Spiers was born in 1838, the eldest son of Alderman Richard James Spiers, J.P., F.S.A., a leading citizen of Oxford and Mayor of that city in 1854. He was educated at King's College School, and afterwards in the Engineering Department of King's College, London, of which he became Hon. Fellow. For three years from 1858 he was a student of architecture in the Atelier Questel of the École des Beaux-Arts, Paris. Returning to London, he entered the office of Sir M. Digby Wyatt, where he assisted in the preparation of designs for the interior construction and decoration of the India Office, in St. James's Park and Whitehall. He became an Associate of the Institute in 1861, and was one of the nineteen candidates who sat for the first Voluntary Examination held by the Institute in 1863 and one of the eight who passed in the Class of Proficiency. In the following year he sat again, and was the first of the only three architects who passed in the Class of Distinction. As a student at the Royal Academy Schools he gained in 1863 both the Silver Medal and the Gold Medal, and in 1864 he was awarded the Travelling Studentship. In 1865 he won at the Institute the Soane Medallion and £50 with a set of seven drawings and a description of "An Institute for the Study, Practice, and Performance of Music." The money went towards the expenses of an eighteen months' tour in Germany, France, Greece, Constantinople, Palestine, Syria, and Egypt, in which he was accompanied by M. le Brun. Many of the studies made during the tour have been exhibited and published. Returning to London in 1866, he assisted in the delineation of the design submitted by William Burges, A.R.A., for the new Law Courts. It is interesting to mention that Mr. Spiers' drawing of a portion of the Strand front was eventually presented by H.M. Office of Works to the Architectural Association. He competed with Mr. C. J. Phipps for the Church of the Sacré Cœur, Montmartre, in the accepted Modern French method, then quite out of key with English ideas. His executed works include additions to Umberslade, Warwickshire, for Mr. F. G. Muntz, M.P.; the restoration of the churches of Hampton Poyle and Weston-on-the-Green, Oxfordshire; Lord Monkswell's house on the Chelsea Embankment;

studios for Mr. Thomas Faed, R.A., Mr. R. W. Beavis, and Mrs. Jopling; two studios at Campden Hill Square for Mr. Andrew Tuer; two houses in Bedford Gardens, Nottingham Hill Gate; two London Board Schools, and additions and alterations to the Beckett Hospital, Barnsley. He planned and laid out the grounds of Locke Park, Barnsley, for Mrs. Locke; and in collaboration with M. Trouquois, of Paris, designed and carried out Impney Court, near Droitwich, for the late Mr. John Corbett.

When the Royal Academy migrated to Burlington House in 1870 Mr. Spiers was appointed Master of the Architectural School. He held the appointment for thirty-six years, retiring at the end of the July Session, 1906. In 1905 the general appreciation of his services was the cause of a remarkable demonstration. Mr. Spiers was entertained at dinner by a large and influential gathering of his friends, former pupils, and fellow-artists (under the presidency of Sir Aston Webb), who presented to him an illuminated address bearing the signatures of over 300 British architects, twenty-four from the Colonies, fifteen from the United States, three from France (besides an address sent by the Société Centrale des Architectes Français, and one from the old students of the Atelier Blouet-Gilbert-Questel-Pascal, Paris), four from Japan, five from Holland, and many others. The gifts presented to him that evening embraced some books from his former Academy pupils, a medallion with portrait, modelled by Professor Lanteri, a smaller medallion portrait from the Architectural Association, a commemorative medal struck in his honour by the Société Centrale des Architectes Français, four volumes of *L'Architecture Française de Blondel*, by the Atelier above mentioned, and a copy of Mr. Spiers' *Architecture East and West*, consisting of a series of essays collected and published by the Testimonial Committee. Mr. Spiers generously devoted the money balance of the fund to the forming of a national collection of drawings of ancient architecture to be deposited in the Victoria and Albert Museum. In this undertaking he was joined by Mr. R. Weir Schultz (now Mr. R. S. Weir) and Professor W. R. Lethaby, and as a result several thousand valuable measured drawings of important buildings or designs and working drawings by distinguished architects are now available to students at South Kensington.

Mr. Spiers was elected a Fellow of the Institute in 1877. He served on the Council for fifteen years—1888-1903; was a member of the Literature Committee for twenty-two years, and Chairman for eleven years. He was a constant contributor to the JOURNAL, was until latterly a regular attendant and frequent speaker at the evening meetings, and read the following Papers:—"Notes respecting some of the Condemned City Churches" (TRANSACTIONS 1876-77); "On the Students' Text-book proposed to be published by the Institute" (ib. 1870-71); "The Chateau of Pierrefonds and its Restoration by M. Viollet-le-Duc" (ib. 1873-74); "The French Diplôme d'Architecte and the German System of Architectural Education" (ib. 1883-84); "The Foreign System of Shading and Tinting Drawings" (ib., 1884-85); "Notes on the Arab House of Egypt" (ib. 1889-90); "Sassanian Architecture" (ib. 1890-91); "Saint-Front of Périgueux and the Domed Churches of Périgord and the Charente" (JOURNAL, 1895-96); "The Great Mosque of the Omeyyads" (JOURNAL, 1896-97, 1897-98). Some of these Papers were included in the volume, *Architecture East and West*, published as part of the testimonial above referred to. Others of his published works are his editions of Pugin's *Normandy, Architectural Drawing*, and *The Orders of Architecture*. He did the very

important work of keeping up to date Fergusson's *History of Architecture*, and wrote the whole of the Roman part and some of the Greek chapters of Anderson and Spiers' *Architecture of Greece and Rome*. He contributed the articles upon Persian and Roman Architecture to Dr. Russell Sturgis's *Dictionary of Architecture*, and those upon Architecture and Architectural Archaeology to the *Encyclopædia Britannica*.

He was a member and Past-President of the Architectural Association; Membre Correspondant de l'Institut de France; Hon. and Corresponding Member of the Société Centrale des Architectes Français, Paris, and of the Sociedad de los Arquitectos, Madrid; Hon. Associate of the American Institute of Architects, and Associate and Hon. Fellow of King's College, London.

The funeral took place at Brookwood Cemetery on the 5th October, the Council of the Institute being represented by Sir John Burnet, R.S.A., Vice-President. An excellent full-page portrait sketch of Mr. Spiers appeared in *The Builder* for the 13th October, and the *Architects' and Builders' Journal* of the 18th has an illustration of Professor Lanteri's medallion portrait above mentioned.

TOWN PLANNING.

PRÉCIS OF MR. LANCHESTER'S MADRAS LECTURES.—V.

(Continued from p. 322.)

The eighth lecture was devoted to a comparison of "Indian and European Cities," the matter relating to Indian cities being drawn largely from Indian literature on town and village planning as practised in ancient times.

While many Indian cities vie in antiquity with ours, the existing city in Europe is on the average more stable than the Indian city. In Europe there are but few deserted cities such as are not infrequent in India. Despite wars and catastrophes, almost all the places that show prominently in European history of the last 2,000 years are going concerns to-day. Whilst in India some of the glorious cities of the past exist but in name, others are inhabited only by the goats and the bats. The lecturer suggested that the reason might be that the European city was located by economic needs, the Indian by imaginative caprice. The Indian potentate seemed to have built his city as an artist would paint a picture. In roving over his possessions, some site or other seized on his imagination as the basis of a scheme of beauty such as the European never dreamed of. He set to work strenuously to realise his vision, and, perhaps at the cost of a continuing economic strain, his race maintained and developed his undertaking. Once the guiding effort was removed there was no security for its permanence. European cities have been destroyed, but they have persisted. Indian cities once gone rarely seem to revive, and the Indian regarded their lapse with more equanimity than would be felt in Europe. The European city, being more firmly rooted, is naturally more uniformly substantial. There is a constant polishing up and various forms of adaptation always going on, with a view to maintaining the city, as a working machine, at a high level. This lack of continued effort in the Indian town looked too much as if its inhabitants had doubts of its continuance, as if this or that little thing was hardly worth while, in view of the fact that the city might take wings, like so many of its predecessors, leaving behind, perhaps, only the fine temple to testify to its former greatness.

The ancient Hindu cities were planned with great care. It would probably be a revelation to modern architects to know how scientifically the problems of town planning were treated in the ancient Indian architectural treatises. The experience of many generations had proved that the old plans and rules of construction, as given in the *Silpa-sastras*, were the best for purposes of defence, and gave the most healthy, pleasant, and practical lay-out for an Indian village or town. The easterly axis of the plan ensured that the principal streets were purified by the rays of the sun sweeping through them from morning till evening; while the intersection of main streets by shorter ones running north and south provided a perfect circulation of air and the utmost benefit of the cool breezes.

Just as the village cottage, or village hut, formed the unit of house-planning, so the village plan was the unit used to form the mahalla, or ward, in town-planning. The *Manasara* recognises forty different classes of villages and towns, according to the extent of the lands owned by them, commencing with a village unit which was 4,000 feet square, so that the extent of the largest cities would be about 30 English miles square. Of this area, about one-third was devoted to building space and the rest to the agricultural lands owned by the community. Neither a village nor a town was usually square in plan, but a rectangle, with the long sides running east and west so as to secure a proper circulation of air, even in the largest cities. One of the long sides generally faced a lake or river, an arrangement which provided bathing facilities for all the inhabitants, and obviated the necessity of building defensive works all round.

Having examined in detail some of the village plans, of which eight standard types were given in the *Manasara*, Mr. Lanchester said that the European, whose guiding rules were much less detailed than these, was thrown much more on his own resources, and for this reason perhaps his cities, defective though they might be in some respects, are based more closely on obviously logical needs—such as those of defence and, subsequently, of commerce and industrial facilities. He by no means suggested that the useful suggestions of their own teachers should be disregarded in India, but there was the necessity of appreciating the points in which they are applicable to present conditions and of interpreting them broadly in the light of modern practice, so that developments in the future were not hampered by misunderstanding of the true intention of the *Sastras* and of the merits that it was their aim to secure.

In the ninth lecture, "Problems in India" were discussed, the special factors dictating the character of the Indian city at the present time being briefly studied. The lecturer hoped that while accepting the advantages of the new conditions of things the merits of the old might be retained. He claimed to be an evolutionist, not a revolutionist, and he hoped to convince them, if they needed convincing, that this was the sane and rational method of solution for the problems that faced us in the near future. The after-effects of unrestricted industrialism were still sufficiently conspicuous to make us extremely dubious as to its advantages, and extremely desirous of seeing every possible precaution taken when we find mechanical methods of production taking the place of the individual craftsman. The more anyone is able to take an interest in the craft by which he earns his bread, the more efficiently and vitally will he exercise that craft and the more will his faculties be expanded. Those countries that are most under the domination of industrial organisation on a large scale, pay a heavy toll in deteriorated masses of people,

ever on the verge of being unfit for their own or any other employment. Does, he asked, a superior standard of luxury compensate for this state of affairs?

So far, the Indian city has to a large extent escaped this tendency, and its system of hereditary trades increases its powers of resistance. He asked them not to encourage the break-up of the Indian social system; it had been of value in the past and might be of no less value in the future. The traditional divisions of the people and their prescriptive occupations were of service in helping to resist the temptations that wholesale exploitation held out, and might keep this at bay until the conditions of organised output became far better than they were at present. The Indian was less qualified to resist adverse influences than the European, who had had to fight for his position till it had become a habit, and the class termed "unemployable" would much more quickly arise; therefore, he should keep to a system that acts as a check on such an undesirable development.

Speaking of sanitation, the lecturer said that India had in the past a definite sanitary system, perhaps ideally perfect for small communities and provided it was rigidly adhered to. Neither of these conditions, however, had been maintained. Even the large city of old days was more or less a series of groups, with gardens and open spaces in between, quite unlike the closely packed towns of later centuries. Again, the discipline of strict observances had become relaxed, with the result that it was impossible to restore the old conditions in the larger cities of to-day. There seemed to be two alternatives where the city was definitely and irrevocably compacted together. The lecturer said he saw no other course than the adoption of European methods, with such adaptations as could be made to meet national habits, and when everything practicable had been done in this direction to train the people to fall in line with the demands the system makes. At the same time, everything possible should be done to avoid building developments that necessitated the extension of sewerage systems, so that for as long as practicable there might be the alternative of the more traditional practices. The open lay-out of the garden suburb was of use in this respect, and it would help if the old idea of the city as a group of villages could be revived. They could not afford to introduce everywhere the costly systems demanded in Europe, neither would they benefit them unless the inhabitants were prepared to accept the change.

REVIEWS.

THE GREEK HOUSE.

The Greek House: Its History and Development from the Neolithic Period to the Hellenistic Age. By Bertha Carr Rider, M.A., D.Litt.Lond. 8vo. 1916. 10s. 6d. net. [University Press, Cambridge.]

The author has collected a mass of information regarding the historic development of the planning of the Greek house gleaned from archaeological sources. The circular tent-like hut developing into an oval form is exhaustively discussed, Lacustrine dwellings are touched upon, and early rectangular structures are dealt with fully. Cretan palaces are carefully studied and compared. The palaces at Mycenae,

Sirius and Arne on the Mainland can now be regarded as a faint reflection of the glory and brilliance of Cretan civilisation. Other domestic buildings are discussed, all leading up to and bearing upon the disposition of the Homeric House.

The author, after carefully studying these plans and the writing of Homer, gives a description of the house of Odysseus. It had a large principal room standing on the north side of a courtyard, with living and sleeping rooms and stables grouped round. There was an upper storey approached by a staircase, and certain offices at the rear.

As the women of Greece had more freedom than those of Rome no special planning appears to have been necessary. It was not till the second century B.C. that special apartments seem to have been called for, which is the Greek house described by Vitruvius. The author is of opinion that the house with two courts which he describes came into being about the same time. Plans are given of the ordinary Greek house at Priene with one court, and at Pompeii with two courts, to substantiate the conclusion come to.

Many of the plans appear to be mere foundation walls of stone. Certainly they were above ground, but were probably used as stores, offices and stables; the living rooms were often on the floor above, which was constructed of timber and jugged out in picturesque form from the stonework below. The usual plan, even to the present day, on this floor is a large hall with a room at the end, and smaller rooms and staircases at the sides, the fourth side having the windows: all quite compatible with the Homeric plan.

There are always difficulties in co-ordinating information and weaving it together as one consistent whole. The large number of interesting plans should have been so placed that the north of the compass points to the top of the page, not varying in all directions. In the description in the text the points of the compass are used for identification, and the want of regularity makes confusion and difficulty when comparing one plan with another. Of course unequal scales are unavoidable, but dimensions are found given in feet in one place and a few lines later in metres according to the author quoted. It would have repaid the trouble if one or other notation had been consistently used.

A few photographs and views would have materially lightened the reading, but we may perhaps look forward to a second volume by the author, dealing with the appearance of the Greek house with its decorative details, furnishings and accessories. Such a work of co-ordination would no doubt be less archaeological, but would be putting archaeological discoveries to a useful purpose, and not only be interesting but architecturally useful, especially at the present time when there is a distinct revival of the influence of the Greek ideals of taste.

A. E. HENDERSON, F.S.A. [*Licentiate*].

CC

MARBLES.

British and Foreign Marbles and other Ornamental Stones.
By John Watson, Hon. M.A. Cantab. 8°. 1916. 5s. net.
[Cambridge University Press.]

The Cambridge University Press has just published Mr. John Watson's book on Marbles, which he modestly describes as a Descriptive Catalogue of the Specimens of British and Foreign Marbles and other Ornamental Stones in the Sedgwick Museum at Cambridge.

This is a companion volume to his valuable book on British and Foreign Building Stones, published in 1911. To architects these books should appeal with particular interest, for, in our opinion, there are no other works which give to architects the precise information they desire in the same clear and practical way as it is presented in these books.

It is owing to the indefatigable labour of Mr. Watson—and it has been a labour of love on his part—that the great collection of Building Stones and Marbles has been made from all parts of the world. The importance of the collection is recognised by those officially connected with the Sedgwick Museum at Cambridge, where in the Economic Section, on the ground floor, the collection is exhibited.

It is the economic value of this exhibition which will appeal to architects, and they will appreciate the commercial rather than the scientific definitions that have been adopted by Mr. Watson.

In his introduction to his book on Marbles he points out that the collection is intended chiefly for those who are studying economic geology, and he hopes that it may be useful to the students who are affiliated to the new School of Architecture at Cambridge. We hope and believe, and we have no hesitation in saying, that Mr. Watson's labours deserve to have a very much wider field of usefulness. It is a matter of first importance that the most suitable and procurable materials should be selected by the architect in practice, and at the Sedgwick Museum this unique collection of Building Stones and Marbles is open for his inspection. Here he can make a comparative selection, and with the assistance of the admirable descriptive catalogues he may learn of the weathering and other properties of the materials displayed before him. This book on Marbles, like its companion volume on Building Stones, is full of interest, for not only do we get a clear description of these materials, but also reference is made to buildings, from Classic times downwards, where they have been used.

In the use of marble for internal decoration Mr. Watson points out that you have a material incomparably superior as regards durability to anything that exists which is at all suitable for the purpose. This is undeniably true, though our insular prejudices will probably bind us to adhere to our commoner materials; but we entirely agree with him when he points out that "as an aid to Hygienics the use of marble is making rapid strides, and it is the opinion of some that the day is not far distant when the lining of the walls of sanatoria and hospital wards with marble, especially those set apart for the treatment of infectious maladies, will

be regarded as necessary. Nothing could be more wholesome and appropriate for the walls and floors of an operating theatre than marble; they can be cleansed continuously with a minimum of labour, and a complete absence of wear and tear."

We sincerely congratulate Mr. Watson. Through his energy the unique collection of Building Stones and Marbles has been brought together from all parts of the earth and he has arranged and classified them in the Sedgwick Museum. In addition to this he has compiled the books which describe the collection in a lucid and practical manner.

Mr. Watson has accomplished a great work and we hope that in the future it may be appreciated at its proper value.

GEORGE HUBBARD, F.S.A. [F.]

BUILDING CONSTRUCTION.

Architectural Building Construction. By Walter R. Jaggard, F.R.I.B.A., and Francis E. Drury, Fellow Inst. San. Engineers. Vol. I. 8°. 1916. 6s. net. pp. xxiv. and 303. [Cambridge University Press.]

The books on building construction written in a preceding generation were intended for all, but in recent years architects have been favoured with a number of books definitely written to instruct them in the philosophy and practice of the subject. There were the Building Construction volumes in the Architects' Library, and quite recently Rivington's celebrated Notes have been re-written by architects. Now we have the first volume of this *Architectural Building Construction*, by Messrs. Jaggard and Drury, which is rather different in its method from the previous volumes prepared for the use of architects.

The authors have a sound belief that "building construction should not be divorced from the principles of architectural design" (p. vii), and "by elucidating the details of construction of a whole building, a student, in his earliest study of the subject, is brought into contact with the necessity for treating each element of a structure as a unit in a complete scheme" (p. xi). Messrs. Jaggard and Drury have, therefore, designed two ordinary buildings and described their construction completely, claiming that this method does "enable them in a more or less pleasing manner to assemble the different units of the building and at the same time to inculcate a sense of completeness in the student's work" (p. ix).

The two buildings chosen for examples, a cottage and a workshop, are first described in the text, and, incidentally, one may doubt whether the cottage could be carried out as described and illustrated in detail at 4d. per cub. ft. as the authors say (p. xix). The succeeding chapters follow the usual order of a specification—viz., Bricklayer and Mason, Carpenter and Joiner, Steelworker, Slater and Plumber. The Plasterer's, Glazier's and Painter's works, together with the materials, are described in Vol. II. The student who carefully studies these two volumes will acquire a very good knowledge of sound modern building construction.

The authors are to be congratulated on the completeness of their collaboration in the writing. One searches in vain for any evidence of dual authorship, and one wonders what would be the result on the succeeding volumes of a tiff between them! Which is the Walter Besant? Which the James Rice?

The illustrations are very well done, and full in detail. "The authors have often felt that the ordinary orthogonal presentation of examples of building construction does not sufficiently convey the solidity of the object to an elementary student, and . . . the illustrations have to a large extent been shown in perspective, isometric, or pictorial projection" (p. ix). Some of the examples have been shown as actually executed, by photographs: this, one thinks, might be developed still farther, to show how the subject of a detail or other drawing appears in reality. A new feature is the pocket at the end with working drawings of the cottage and the workshop.

The printing is good, and the binding strong and plain. There is but little to criticise: only minor matters such as, for instance, the superfluity of quotation marks. Why should "securing in position," on p. 212, and "sagging due to wear," on p. 214, be favoured in this manner? Also, should not the young architect have been warned not to make himself responsible for the design of the builder's temporary timbering in trenches and "centers," as described and illustrated on pp. 108-116? And the writer has a belief that bricknogged partitions (pp. 182-184) should have now a merely historical interest. A list or index of the illustrations would have been useful as they number 211. But these matters are not of much importance, and the book may be recommended as an original and valuable addition to the literature of the subject.

C. F. INNOCENT [A.].



9 CONDUIT STREET, LONDON, W., 21st October 1916.

CHRONICLE.

The R.I.B.A. Record of Honour: Thirty-fifth List.

Fallen in the War.

BULL, 2nd Lieut. JOSEPH WILLIAM [*Associate*], Royal Engineers. Died of wounds. Aged twenty-five.

The death, on 1st October, from wounds received on 26th September, of Lieutenant J. W. Bull has added another name to the Roll of those of our Institute who have made the great sacrifice. J. W. Bull was not known personally to many of our members, but was of those who were studying in order to be bearers of the torch. He was articled to Mr. Horace Dove, F.S.I., but feeling the call of the "Mistress Art," he commenced the study of architecture some seven years ago, and though he never showed exceptional brilliance, yet his love for the work carried him on, and he eventually passed his Final Examination and commenced practice as an architect some few months before the declaration of War. He joined the Artists' Rifles early in August 1914, and after some weeks' training was sent to France. On arrival there the Artists were formed into an O.T.C., and Bull was eventually gazetted to the 2nd East Lancs., but was attached to the Royal Engineers for special duty in connection with the erection of huts. He later resigned this commission, and was gazetted again as Lieutenant of the Royal Engineers.

I have known him for some years, and in directing his studies I was able to appreciate his sterling qualities, his optimistic yet withal serious outlook upon life, his gentlemanliness and honest uprightness of purpose. My sense

of loss at his early death is shared by his fellow-students and all those who had the privilege of his friendship.

W. R. JAGGARD [F.].

GRISSELL, 2nd Lieut. FRANCIS [*Associate*], Coldstream Guards. Killed in action, 15th September.

Second Lieutenant Grissell, who was the youngest son of the late Mr. Grissell, of Redisham Hall, Beccles, was educated at Warren Hill, Eastbourne, and at Harrow. He served his articles with Messrs. Nicholson & Corlette, and studied at the Royal College of Art, where he was awarded the Diploma in Architecture. He was engaged in the Clerk of Works' Office, King's College Hospital, and acted as Clerk of Works for the building of St. Mary's Church, Plymouth. He was afterwards for a time in the office of Mr. E. S. Prior, and was elected an Associate of the Institute in 1913. On the outbreak of war he enlisted in the Artists' Rifles, and later obtained a commission in the Coldstream Guards.

WEBB, 2nd Lieut. PHILIP EDWARD [*Associate Member of the R.I.B.A. Council*], Royal Engineers. Killed in action on 25th September. Aged thirty.

Second Lieutenant Webb was the son of Sir Aston and Lady Webb, and was educated at the Grange, Folkestone, and at Charterhouse. He passed through the Schools of the Royal Academy and the Architectural Association, and then entered his father's office and subsequently became a partner with him. He became a Student of the Royal Institute of British Architects in 1911, and was elected an Associate in 1912. He was at the time of his death an Associate Member of the Institute Council and a member of the Art Standing Committee. He was elected a member of the Architectural Association in 1905 and of the Council of that body in 1914, and in the same year became Hon. Treasurer of the Architects' and Surveyors' Approved Society. He joined the Royal Engineers as a Second Lieutenant after serving in the London University O.T.C., and was trained at Chatham and Deganwy in North Wales. He went out to the front on 24th July, and on the night of 25th September was sent forward on a special piece of work and soon after he started was killed instantly by a shell and was buried by his men where he fell.

At the meeting of the Council last Monday it was Resolved, upon the motion of the President, that an expression of the Council's very deep regret at the loss of 2nd Lieutenant Philip E. Webb, Associate Member of Council, be entered on the Minutes, and that a message of their sincerest sympathy and condolence be conveyed to Sir Aston and Lady Webb.

PHILP, Captain RICHARD MANNING HAIG [*Associate*], Royal Field Artillery. Killed in action. Aged twenty-eight.

Captain Philp was the only son of the late Richard Philp, of Geelong, Victoria, and Mrs. Philp, of Sydney, and grandson of the late Sir W. M. Manning, K.C.M.G., of Wallaroy, Sydney. He served his articles for four years with Mr. Walter Newman, of Sydney, N.S.W., and afterwards spent some months in European travel. In 1912-13 he attended the A.A. Day School course, and was elected Associate of the Institute in December, 1914.

RUSHWORTH, Captain TOM SADLER [*Associate*], of the 7th Battalion City of London Territorials. Killed in action on the Somme front, 18th September. Aged thirty-five.

Captain Rushworth was the second son of Mr. Wm. Rushworth [F.], Education Architect for the County Council of Durham. After completing his articles in his father's office, he obtained an appointment in the Housing Department of the London County Council, and became an Associate of the Institute in 1913. On the outbreak of war the battalion in which he was a subaltern volunteered for foreign service, and went to France in March 1915. Captain Rushworth was wounded at Vimy Ridge, and was mentioned in despatches for gallant conduct in the field. Writing to Mrs. Rushworth, his Commanding Officer says:

"Your husband was killed, I believe, instantaneously, by a shell, and so escaped any prolonged suffering. . . . It may, in time, be of some consolation to you to know that your husband and his company carried the two German trenches as brave Englishmen do, that the Generals congratulated the brigade on its fine work in capturing a strong position which had been attempted by other brigades several times before and in each case failed—a position which is of the greatest value to the British Army—and, though your husband laid his life down for his country, the bravery of his action is not in vain, sad though the loss must be to you. I lose a fine and brave officer, and we all mourn a valued friend and comrade."

PETCH, ERNEST SCOTT [*Associate*], 4th Royal Scots, Edinburgh [T.]. Posted as missing at the Dardanelles on 28th June, 1915, and now stated to be killed. Aged thirty-one.

Mr. E. Scott Petch was the son of Mr. J. Caleb Petch, architect and surveyor, of Scarborough. He was educated at St. Martin's Grammar School, Scarborough, and Silcoates College, Wakefield. He served his articles with his father, and passed the Final Examination and was elected Associate of the Institute in 1909. In 1911 he went to Edinburgh on the temporary staff of H.M. Office of Works, and left there in April, 1914, to enter a private firm, with the ultimate intention of joining his father in partnership. An old Territorial, he joined his regiment, attached to the 4th Royal Scots, immediately on the outbreak of war, and took part in the landing at Gallipoli on 28th June, 1915. He was at first reported missing, but his body was found on the field of battle in December, 1915, and was interred by his comrades.

TAYLOR, Lance-Corporal JOSEPH HENRY [*Associate*], Sanitary Section, R.A.M.C. Killed by a shell at Longuevalle on 28th July while acting as stretcher-bearer.

Lance-Corporal Taylor was articled to Mr. A. H. Ryan-Tenison, and attended the evening classes of the Architectural Association. He was elected an Associate of the Institute in 1908, and for the past five years had been on the unattached staff of the Architects' Department, London County Council.

JENKINS, Lieut. WILLIAM M. [*Student*], Welsh Pioneer Battalion, of Port Talbot. Killed in action. Aged twenty-five.

Lieut. Jenkins, when he enlisted, was in sole charge of the Land Valuation Department at Rhyl, Prestatyn, and St. Asaph, North Wales. He served his articles with Mr. Thomas Gibb, of Port Talbot. He was placed eleventh in the R.I.B.A. Intermediate Examination, and was a Professional Associate of the Surveyors' Institution.

BAGSHAW, ARTHUR SAMUEL [*Probationer*], West Kent Yeomanry. Killed in action. Aged twenty-seven.

Missing.

GUTTERIDGE, 2nd Lieut. RICHARD HOWARD [*Associate*], London Regiment. Reported missing in list of casualties published 11th October.

Awarded the V.C.

Captain Eric Norman Frankland Bell, of the Royal Inniskillings, is the first architect to receive the Victoria Cross, and it comes to him posthumously, for, as already announced in the JOURNAL, he fell in the early days of the Somme battle. The official record in the *London Gazette* of 26th September thus describes the splendid valour which won him the distinction: "He was in command of a trench mortar battery, and advanced with the infantry in the attack. When our front line was hung up by enfilading machine-gun fire, Captain Bell crept forward and shot the machine gunner. Later on, on three occasions, when bombing parties, which were clearing enemy's trenches, were unable to advance, he went forward alone and threw trench mortar bombs among the enemy. When he had no more bombs he stood on the parapet, under intense fire, and used a rifle with great coolness and effect on the enemy advancing to counter-attack. Finally he was killed rallying and reorganising infantry parties which had lost their officers. All this was outside the scope of his normal duties with the battery. He gave his life in his supreme devotion to duty."

Captain Bell was a student of the School of Architecture, Liverpool University, and was half-way through his course when war broke out and he volunteered for service. He had submitted two sets of designs as Testimonies of Study for the R.I.B.A. Final Examination.

Serving with the Forces.

The following is the Thirty-fifth List of Members, Licentiates, and Students R.I.B.A. serving with the Forces, the total to date being 68 Fellows, 494 Associates, 301 Licentiates, and 286 Students:—

FELLOW.

Hare, Henry T.: Lieut., Special Services, Army Service Corps.

ASSOCIATES.

Hickman, Ernest J.: Friends' Ambulance Unit, B.E.F.
Rigg, W. Arthur: 105th Training Reserve Battalion.
Williams, Enoch: Royal Engineers.



PHILIP EDWARD WEBB, *Associate*.
2nd Lieut., Royal Engineers.
Killed in action (see p. 329).



JOHN KINGSTON GROUND, *Associate*.
2nd Lieut., 10th Bn., Royal West Kent Regiment.
Killed in action (see p. 290).



ALFRED EDGAR STOTT, *Student*.
Private, King's Liverpool Regiment.
Died of wounds (see p. 292).



EDWARD WOODHOUSE STUBBS, *Associate*.
Lance-Corporal, 72nd Section, 32nd Division,
R.A.M.C.
Killed in action (see p. 326).



LICENTIATES.

Cannon, F.: Army Veterinary Corps.
 Lane, G. W. C.: 5th West Yorkshire Regt.
 Maddick, George: 2nd Lieut., Army Service Corps.
 Wilson, T. Millwood: Royal Flying Corps.

Promotions, Appointments, &c.

Bax, G. Gordon [A.], Coy. Sergt. Major, Artists' Rifles, to 2nd Lieut., Machine Gun Corps.
 Bridgman, Gerald S. [Probationer], to 2nd Lieut., Royal Engineers.
 Broad, K. S. [A.], to Lieut., Leinster Regt.
 Bunce, Henry Edgar [A.], to 2nd Lieut., Royal Engineers.
 Capper, Major S. H. [A.] has been on active service since mobilisation in August 1914, and holds the position of Military Censor in Charge at Alexandria.
 Curtis, S. Carey [A.], Captain, R.E., to Major Commanding Royal Engineers, Guernsey and Alderney District.
 Dicksee, Harold J. H. [Student], Sergeant-Instructor, Artists' Rifles, has been gazetted 2nd Lieut., General List, attached for duty with the Royal Flying Corps.
 Ewen, A. J. Clifford [Licentiate], Artists' Rifles, to 2nd Lieut., Worcestershire Regiment.
 Gutteridge, R. H. [A.], Artists' Rifles, to 2nd Lieut., 9th London Regt. (Queen Victoria's Rifles).
 Hall, H. Austen [F.], Sub-Lieut., R.N.V.R.
 Jones, C. H. Montagu [A.], R.N.A.S., to Lieut., R.G.A., A.A. Gun, Shotley, Suffolk.
 Newman, B. Leigh [Licentiate], to 2nd Lieut., R.E., from Canadian A.S.C.
 Papworth, A. Wyatt [A.], to 2nd Lieut., Royal Engineers, No. 2 Depot Co., Newark-on-Trent.
 Pett, H. Milburn [A.], to Lieut. and Inspector of Works, Staff for R.E. Services.
 Piercy, 2nd Lieut. A. Raymond [Licentiate], Royal Garrison Artillery, has been obliged to relinquish his commission on account of ill-health.
 Webb, Maurice E., Lieut., R.E., to be Captain.
 Whiteley, C. T. [A.], Artists' Rifles, to 2nd Lieut., 2/8th R. Warwick Regt.

Members' Sons Fallen.

Continuing the record of members of the Institute who have lost their sons in the War, in addition to those whose sons' names appear on the R.I.B.A. Roll, the death in action is announced of Captain Edgar George Fellowes Prynne, Royal Fusiliers, attached London Regiment, son of Mr. G. H. Fellowes Prynne [F.]. He was reported missing on 16th September, but his body is now stated to have been found on 5th October in front of enemy trenches since occupied by our troops. Captain Fellowes Prynne graduated at Selwyn College, Cambridge, taking his B.A. degree in July 1914. He was stroke of his college boat for two years. He joined the army from the Cambridge O.T.C. immediately on the outbreak of war.

Mr. Henry F. Kerr [A.], of Edinburgh, has lost his only son, 2nd Lieut. Henry T. R. Kerr, aged twenty-one, who was reported missing after a bombing attack, and is now reported by the German authorities to have died of wounds. He enlisted in the Royal Scots in November 1914, and a few months afterwards received a commission in the Cameron Highlanders.

Restrictions upon Private Building.

The Ministry of Munitions forwards the following for publication:—

The continued demand for labour for the construction of munition factories and other buildings of urgent national importance and the enormous demand

for steel for the purposes of the war have compelled the Ministry of Munitions, in the national interest, to place certain restrictions upon private building. It would be idle to pretend that the restrictions will cause no inconvenience. What is important to make clear is that such inconvenience as the regulations may entail is an unavoidable consequence of the nation's urgent need.

Every trade in the country has had to take its share in the great task of finding men for the Army. The building trade has had the additional duty of assisting in the equipment of the Forces, for the immense increase in the output of munitions could never have been achieved if new factories had not been constructed at unexampled speed. Nor is the work by any means finished. Mr. Montagu in his statement in the House of Commons said: "I hope that the country will not think that all has been accomplished." There are, indeed, many new factories which urgently require more building labour for their completion, and the housing of those who are to work in the factories is also a problem which must be faced. At the same time every available man must be released for service in the Navy or the Army.

It is obvious that under these conditions private building must be restricted, and that building labour must be used to supply the most urgent national needs. The necessity for restriction is made still greater by the fact that the use of constructional steel in private building work limits the available supply of a material which is essential for the prosecution of the war.

Some inconvenience all those connected with the building industry must be prepared to face—in the interests of a nation at war. The demand for building labour for munitions factories and other national work is large. The public would be well advised to take advantage of the period during which the regulations are in force to get plans prepared for future undertakings, so that work may be ready to start when the demobilisation of the Army begins after the war. If this can be prepared for beforehand it will be of great advantage when the problems of demobilisation become urgent.

The Future of Charing Cross.

An interesting statement dealing with the Charing Cross Improvement Scheme, prepared by Mr. John Burns [Hon. F.], Sir Aston Webb, R.A. [F.], and Mr. Reginald Blomfield, R.A. [F.], is being published by instalments in the *Observer*.

Part II., published on the 15th, after criticising the existing station and bridge as unsightly, inadequate, and an insuperable obstacle to the development of London, goes on to show the crying need for a roadway bridge from Charing Cross to the Surrey side. All vehicular traffic from the south side opposite has now to come either by Westminster Bridge or Waterloo, and the blocks on both bridges are a serious inconvenience to the public, particularly in the case of Waterloo Bridge, where the congestion produces that familiar and most irritating holding-up of the traffic at the Strand crossing. The distance between



FRANCIS GRISSSELL, *Associate*.
2nd Lieut., Coldstream Guards
Killed in action (see p. 333).



JOSEPH HENRY TAYLOR, *Associate*.
Lance-Corporal, Sanitary Section, R A M C.
Killed in action (see p. 340).

Westminster and Waterloo Bridges is greater than that between any other two London bridges. The distance between London Bridge and Southwark is about 480 yards, between Blackfriars and Waterloo 960 yards, between Waterloo and Westminster 1,200 yards.

The objects of those who oppose the spending of money on the railway bridge are to prevent the perpetuation of the existing artistic atrocity, to have the station transferred to the south side of the river, and to have in connection with this new station and existing main arterial roads a new roadway with a magnificent bridge landing on the north side of the river somewhere in the neighbourhood of Trafalgar Square. The London County Council is undoubtedly the authority to take up the scheme and carry it through, and with them would co-operate, it is hoped, His Majesty's Government, the Port of London, the Corporation of the City of London, the Westminster City Council, and the Lambeth Borough Council. As to whether the bridge should be high-level or low-level, the writers are disposed to favour the high-level as involving less interference with navigation. The new bridge, too, should be kept clear of the site of the present one. If it follows the line of the existing bridge, or even cuts across a part of it, serious difficulties would arise. Other considerations put forward are the following:—

(a) Subject to the securing of a bridge worthy of this great enterprise, as large a part as possible of the site of the present station and its approaches should be preserved for building developments.

(b) The new bridge and roadway should link up the main roads on the Middlesex side with the main arterial roads leading south and south-east on the opposite side.

(c) The scheme should secure for the public, not only

improved facilities of traffic, but also a great and monumental achievement worthy of this unparalleled occasion. What is wanted is not only the skill of our engineers and the invention of our artists, but the help of Nature herself must be enlisted in the sense that we want plenty of light and air, ample spaces in which we can see the sky, and where we can get far back enough to enjoy the wonderful play of cloud and sunshine on the buildings of our City and on the river that divides them.

The concluding instalment, to be published in the *Observer* on the 22nd, will embody suggestions for the building of a new vehicular bridge, and for the transference of the station to the south side.

OBITUARY.

James Burgess, C.I.E., LL.D., F.R.S.E. (*Hon. A.*)

Dr. James Burgess, who died at his residence in Edinburgh on the 5th October, at the age of eighty-four, had been an Hon. Associate of the Institute since 1888, and had written for the *JOURNAL* on Indian archaeological subjects. Dr. Burgess went out to India as an architect in the days before the Mutiny, and subsequently did educational work, first in Calcutta and then in Bombay, where he was secretary of the local geographical society. He founded in 1872 the *Indian Antiquary*, which he conducted for twelve years. In 1874 he was appointed Archaeological Surveyor for Western India and a few years later for Southern India as well. In the last three years of his official career, he was Director-General of the Archaeological Survey of India. Dr. Burgess did much to pave the way for the systematic researches of the present day by his detailed reports, with

photographic illustrations, of Indian archaeology, which have been of great assistance to scholars. Of his many descriptive monographs those on Elephanta, the Temples of Somanath, Junagadh, and Girnar, and on the Ajanta Paintings are, perhaps, best known. He collaborated with Fergusson in his *Cave Temples of India*, published thirty-six years ago; and in 1910 was associated with the late Mr. Phéné Spiers in an amplified edition of Fergusson's standard *History of Indian and Eastern Architecture*. He also assisted Miss Duss (now Mrs. Rickmers) in her *Chronology of India*, and in 1913 he completed this undertaking by the issue of a supplementary volume for modern India (1494-1904). In 1898 he was awarded the Keith Medal of the Royal Society of Edinburgh for his Paper "On the Error-function Definite Integral."

Sir James Linton, P.R.I. [*Hon. A.*].

Sir James Drumgole Linton, President of the Royal Institute of Painters in Water-Colours, died on the 3rd October, aged seventy-five. He had been an Honorary Associate of the R.I.B.A. since 1897. Soon after his training as an art student, he began to exhibit works both in water-colour and in oils. His talent lay in the direction of figure and costume painting, and he gained much popularity by drawings representing some favourite historical incident and renderings of Shakespearean episodes. He was a well-known book illustrator, and was a regular contributor to the Royal Academy exhibitions. Sir James was President of the Royal Institute of Painters in Water-Colours from 1884 (when he carried through the building of the new galleries in Piccadilly from Mr. E. R. Robson's designs) till 1899, and again from 1909 till his death.

NOTICES.

Session 1916-17: Programme of General Meetings.

- Nov. 6.—GENERAL MEETING (ORDINARY): President's Opening Address.
 Dec. 18.—GENERAL MEETING (BUSINESS): Election of Members; Nomination of candidates for membership.
 Jan. 8.—GENERAL MEETING (BUSINESS): Election of Members.
 Feb. 5.—GENERAL MEETING (ORDINARY): Announcement of the Council's Nomination for the Royal Gold Medal; Nomination of Candidates for Membership.
 Mar. 5.—GENERAL MEETING (SPECIAL AND BUSINESS): Royal Gold Medallist Election; Election of Members.
 May 7.—ANNUAL GENERAL MEETING: Nomination of Candidates for Membership.
 June 4.—GENERAL MEETING (BUSINESS): Election of Members; Election of Council, &c.
 June 25.—GENERAL MEETING (ORDINARY): Presentation of Royal Gold Medal.

THE FIRST GENERAL MEETING (ORDINARY) of the Session 1916-17 will be held Monday, 6th November, 1916, when the Chair will be taken by the President, Mr. Ernest Newton, A.R.A., at 3.30 p.m. precisely, for the following purposes:—

To read the Minutes of the General Meeting (Ordinary) held Monday, 19th June; to announce the names of candidates for membership; to admit members attending for the first time since their election.

Mr. ERNEST NEWTON, A.R.A., to deliver
 THE OPENING ADDRESS OF THE SESSION.

Election of Members.

In accordance with the provisions of By-law 8, the names and addresses of the following Applicants for Candidature are published herewith for the information of Fellows and Associates. Notice of any objection or other communication respecting them must be sent to the Secretary R.I.B.A. for submission to the Council prior to Monday, the 6th November. The day of election is the Business Meeting to be held Monday, 18th December.

AS FELLOWS (8).

CHATTERTON: FREDERICK [*Associate*, 1896]; Ministry of Public Works, Cairo, Egypt; and Turf Club, Cairo.
 EDWARDS: ARTHUR CECIL MORRIS [*Associate*, 1908]; Sea Road, Cooden Beach, Bexhill-on-Sea.
 REAVELL: GEORGE [*Associate*, 1899]; Lloyd's Bank Chambers, Alnwick; and Prudhoe Street, Alnwick; together with the following Licentiates who have passed the Qualifying Examination:
 ALDER: JOHN SAMUEL; 1 Arundel Street, Strand, W.C.; and 33 Bedford Gardens, Kensington, W.
 ALSOP: RODNEY HOWARD; 90 William Street, Melbourne.
 FERRIER: CLAUDE WATERLOW; 11 Waterloo Place, Pall Mall, S.W.; and 34 Cavendish Square, W.
 GORDON: WALTER SYMINGTON ATHOL; 5 Old Bond Street, W.; and Holland Lodge, Walton-on-Thames.
 LEY: ALGERNON SYDNEY RICHARD; 214 Bishopsgate, E.C.; and Montague House, Sidcup, Kent.

AS ASSOCIATES (12).

All candidates passed the Final Examination last June.

ARMSTRONG: JOHN RAMSAY; Admiralty Works Department, Perth, Scotland; and 2 Marshall Place, Perth.
 BRANDON: CHARLES JOSEPH; 7 Trebovir Road, Earl's Court, S.W.
 ELLISON: ROBERT KITCHING; Shire Hall, Bedford; and 13 Shaftesbury Avenue, Bedford.
 FOULKES: SIDNEY COLWYN; Central Chambers, and Mansfield Groves Road, Colwyn Bay.
 HOLMAN: ARTHUR ROWLAND; Castle House, Exeter; and Strand, Topsham, Devon.
 HUTTON: LOBNE DE H.; 11th Officers' Cadet Battalion, Staff College, Camberley, Surrey.
 KEEP: NORMAN PRISTO; c/o Wontner Smith, Esq., 12 Gray's Inn Square, W.C.; and 15 Belleville Road, Wandsworth Common, S.W.
 LOWRY: ROBERT; 5 Park Road East, Twickenham.
 LUYKEN: HEINRICH MARTIN; Chief Engineer's Office, Port of London Authority; and 23 Arcadian Gardens, Wood Green, N.
 SPARROW: ARTHUR JOHN; 12 Russell Square, W.C.; and Ingram House, Stockwell Road, S.W.
 TODD: HAROLD EDGAR; 15 Clare Street, Bristol; and Harts Cottage, Almondsbury, near Bristol.
 WILSON: JAMES FREDERICK; Borough Architect's Department, Town Hall, Newport, Mon.; and 40 Upton Road, Newport, Mon.

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